

**Chief of Naval Operations  
Adm. Jonathan Greenert's Opening Remarks at the  
Brookings Institution Air-Sea Battle Doctrine  
May 16, 2012**

*Below is Adm. Greenert's opening remarks, to view the transcript from the entire Brookings Institution event click on the link:*

[http://www.brookings.edu/events/2012/05/16-air-sea-doctrine#ref-id=20120516\\_schwartz](http://www.brookings.edu/events/2012/05/16-air-sea-doctrine#ref-id=20120516_schwartz)

***Adm. Greenert:***

Thank you very much, General Schwartz. Ladies and gentlemen, you saw this morning an anecdote of the importance of Air-Sea Battle. General Schwartz was attempting to communicate with all of you and you saw something came up to try to eliminate that. We worked together; I gave a little head nod, we went in there, a little cyber control of the EM spectrum, and things worked out.

So I don't know how much better we can explain how this works. General Schwartz gave us a nice description of the history and really the mandate of the compelling need for Air-Sea Battle.

I'd like to talk just a little bit about why we think it's important, what it can do for us, how we think it can be a good enabler and an enhancer for threats to access, and what our efforts will be to implement this concept. Also, what's been going on so far and what are we going to do here in the future?

We think there's a good strategic operational, tactical, and institutional value for Air-Sea Battle. The anti-access area denial is not the only challenge to naval and air forces, but it's probably the defining challenge today and as we view it in the near future.

Strategically, Air-Sea Battle can help us deter adversaries, reassure our partners and allies by demonstrating the ability to honor our security commitments and to be able to act worldwide for humanitarian assistance and disaster relief. It's a spectrum of values.

It's not about a particular country, as General Schwartz indicated. Anti-access area denial is proliferating. The Arctic is opening is an example. Climate changes take place around the world and we have to get where we need to get in order to act, to provide the effects that we're asked to do.

Operationally, Air-Sea Battle provides us the ways and means to assure access. Some argue that look, we're not going to fight those kinds of wars anymore in the future, but it's not always a big war scenario. It might merely be a contingency. And it's not always about conflict.

There are some natural or nature born or originated anti-access area denial that are a growing concern; earthquakes, the far north, fires on the West Coast, if you remember that. We had to get in there and it wasn't easy to find those sources. And a nuclear disaster that about a year plus

ago we had to figure out how to get to the source of this problem. And we were being denied that.

Institutionally, the integration between the Air Force and the Navy staffs is a great opportunity. We need to gain efficiencies, build appropriate redundancy where it makes sense, and the means by which it will preclude an adversary from finding the one way to develop a solution to preclude or to enable them to provide that anti-access and area denial.

Now the how. The Air-Sea Battle leverages the enduring U.S. advantages that we know well, especially in our two services; the initiatives and skill of our sailors and our airmen, the value that we have under the sea, the ability under the sea, the stealth, the global reach, the cyber capability, and the advantage we have in our networks and networking capabilities.

The central idea here, ladies and gentlemen, is a tightly coordinated operation across warfare domains. Air supporting land in the Cold War, General Schwartz mentioned it and Pete mentioned it in the opening, that was there and some of that is in our current plans. It's maritime supporting the land, which took place in World War II, it took place in the Korea conflict, in the West Coast operations, and in amphibious operations.

Electronic warfare supporting air in suppressing air defenses took place in Libya, jamming. These examples, though, either were put together in the past sort of ad hoc or they were included as part of a particular operational plan; not really part of the concept of operations. And it's really taken what we have and adjusting is what we did in the past.

What we'd like to do is make this cross-domain operation more an assumption for the future. We'll build the concept of operations so that as we organize, as we train, as we equip and do operations in the future we'll think about electronic warfare defeating radars to protect surface and air operations.

We'll talk about submarines defeating air defenses, maybe kinetically and maybe non-kinetically, cyber attack against command and control needs to enable air and surface operations or stealth global strike on an anti-air warfare destroyer to enable air ops. There's a whole panoply of it. The idea is to broaden the aperture in these and make that the standard approach as we think about the concepts of the future.

To do this we're going to need real time coordination across these domains. We do this now, as threats improve, tighter coordination will be needed in the future. One example is we've got to be faster thinking about anything from an anti ship cruise missile, the faster coordination of electronic warfare kill, a non-kinetic kill.

Today our maritime component commander and our air component commander, sometimes they come together at the headquarters, at the task force headquarters. We need to think about that and see if there isn't a faster way to do that.

I'm taken back to my own personal experience in 2005. I'm working with General Deptula who's the Air Combatant Commander on the maritime combatant commander. We're doing an

operation and I've got a submarine out there who's saying 'hey, I'm detecting a radar out here through my periscope and my ESM mask that it's over the horizon. I vaguely have this acoustic contact and I know that it's a threat out there. So how do I get this to the JFACC and then get this back to the air task in order to get it out there?' It takes too long.

So we worked through -- we need to get people on the same net, and General Schwartz mentioned that earlier in that exercise; to getting that faster turnaround, get inside that loop. That's the future. That's what we need to think about. Cross domain coordination requires a new approach. Our links need to be similar or minimally compatible.

Our F-22, F-35, our F-18 Hornets, our RA 2-Ds, navy integrated fire control counter air, NIFC-CA, and our ships; right now some of these links are different. We need to look at coordinating that. Communications between submarines and unmanned underwater vehicles or unmanned aerial vehicles and aircraft need to improve. Unmanned aerial vehicle based comms and links can be the gateways to bridge the domains and we need to get there. We need to have a visibility of the operations that are taking place in the EM spectrum.

Now on operational planning on our cross-domain actions are going to have to be more centralized. Command and control today, as I mentioned, you've got the JFMCC, the Joint Force Maritime Component Commander, the JFACC, the Air Component Commander, the Land Component Commander, and they're in a structure of domains to deal with the problem.

In the future we need to look at should we be looking at missions, should we be looking at strike, at cyber, as something that crosses these domains in a command and control operation. And I say yes we do and our folks are. Air-sea battle provides that means to do that.

It's providing -- it's building cross-domain capability to improve our effects change and gives us more options. We can use an Air Force AWACS or an E-2 with cooperative engagement and share the tracks, what a concept, with our Aegis, with our Hornet, with the F22, with the Raptor, and other TAC air to engage. And it adds the redundancy, in some cases, to be more efficient and we can eliminate eventually some of that duplication as we work through this.

Air-sea battle uses integrated forces for what we like to think as three main lines of effort. It's integrated operations across domains to complete, as I said, our kill chain, but it's also Air-Sea Battle lines of effort to break the adversary's kill or effects chain. We want to disrupt the C4ISR piece of it; decision superiority.

It may be good enough alone if they can't communicate or if something is causing an effect, if some signal is causing a nuclear disaster -- our reactor to operate, how do we go in there and shut that down if the place is empty. How do we get into that information superiority area? Defeat of weapons launch, get to the archer, or defeat the weapon kinetically to defeat the arrow. And so looking at those three lines of effort, kind of summarizes how we approach that.

Now what we're doing to implement Air-Sea Battle. We've got more than 200 initiatives that our respective teams getting together with the Marine Corps and with the Army put out there. A third of them are non-material, from policy to the concept of operations in component that I

mentioned earlier, data link, protocols, information sharing, and the majority of these are in progress.

We've stood up the Air-Sea Battle office last November with Army representation and Marine Corps representation, and of course, our respective services. We've championed initiatives out there. We're pursuing more exercises that -- you've seen an example that General Schwartz -- how do we get more of that? What training opportunities are we not investing in that we really should?

We've weighed in on the investments. Where can we -- why should I be buying this if the Air Force is buying it? Well, maybe we should buy it together. Maybe we should let them operate, or the Army, or the Marine Corps. Where does this make sense?

We're pursuing the relevant scenarios that may be -- that we may be using sooner than we think. Homeland defense, humanitarian assistance, disaster response, support of civil affairs in the homeland, natural disasters, just some I mentioned earlier. And we're investing in Pres Bud 11, we've invested, Pres Bud 12 we've invested, particularly anti- submarine warfare, electronic warfare, air and missile defense, and information sharing.

Our Pres Bud 13, the one on the Hill today, sustains these investments and really provides more resilient C4ISR investments. We have accepted less capacity in some cases, in order to enhance capability to get better capability out there.

Going forward, we will jointly evaluate naval and air investments together through the office, looking at the long range bomber, the data links, like I said, looking for the common or the compatible data links; looking at SSN capability and capacity, looking at tankers, anti surface weapons, surface to surface delivered or air to surface delivered. What's the best way? Cyber, electronic warfare, including electronic attack.

So Air-Sea Battle is a framework for us to organized, to train, and equip our efforts. We will continue to refine it and we'll continue to apply it. And at this national security inflection point, that the defense strategic guidance has laid out for us, it's essential that we have an effective and an efficient way ahead. We think this is one means to get that. Thank you for your time and I look forward to your questions.